AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13 – Canceled.

14. (New) A method for constitutive and/or inducible gene knock down in a vertebrate, or in a tissue culture or cells of a cell culture derived from a vertebrate, which method comprises stably integrating an expression vector comprising a short hairpin RNA construct under control of a ubiquitous promoter into the genome of the vertebrate, of the tissue culture or of the cells of the cell culture.

15. (New) The method of claim 1, wherein the expression vector is suitable for stabile integration into the genome of a vertebrate, or into the genome of the tissue culture or of cells of the cell culture.

16. (New) The method of claim 1, wherein the expression vector contains homologous sequences suitable for integration at a defined genomic locus through homologous recombination in the genome of the vertebrate, in the genome of the tissue culture or in the genome of the cells of the cell culture.

17. (New) The method of claim 3, wherein the cells of the cell culture are embryonic cells.

18. (New) The method of claim 3 wherein the homolgous sequences are suitable for integration at a polymerase II dependent locus in the genome of the vertebrate, in the genome of the tissue culture or in the genome of the cells of the cell culture.

19. (New) The method of claim 1, wherein the expression vector further contains functional sequences selected from the group consisting of splice acceptor sequences, polyadenylation sites and selectable marker sequences.

20. (New) The method of claim 5, wherein the polymerase II dependent locus is selected from the group consisting of a Rosa26, collagen, RNA polymerase, actin and HPRT locus.

21. (New) The method of claim 1, wherein the ubiquitous promoter is selected from the group of promoters consisting of polymerase I, II and III dependent promoters.

22. (New) The method of claim 8 wherein the ubiquitous promoter is selected from the group consisting of a polymerase II or III dependent promoter.

23. (New) The method of claim 8 wherein the ubiquitous promoter is selected from the group consisting of a CMV promoter, a CAGGS promoter, a snRNA promoter, a RNAse P RNA promoter, a tRNA promoter, a 7SL RNA promoter and a 5 S rRNA promoter.

24. (New) The method of claim 10, wherein the S nRNA promoter is a U6 promoter.

25. (New) The method of claim 10, wherein the RNAse P RNA promoter is a H1 promoter

26. (New) The method of claim 1, wherein the ubiquitous promoter is a constitutive promoter.

27. (New) The method of claim 1, wherein the ubiquitous promoter is an inducible promoter.

28. (New) The method of claim 14, wherein the inducible promoter contains an operator sequence selected from the group consisting of tet, Gal4 and lac.

29. (New) The method of claim 1 wherein said vertebrate is a non-human vertebrate.

30. (New) The method of claim 16, wherein the non-human vertebrate is selected from the group of vertebrates consisting of mouse and fish.

31. (New) The method of claim 1, wherein the expression vector is a Pol III dependent promoter driven shRNA construct suitable to be integrated into a ubiquitously active Pol II dependent locus;

32. (New) The method of claim 18, wherein the PolIII dependent promoter is selected from a constitutive H1 promoter and a constitutive U6 promoter.

33. (New) The method of claim 1, wherein the expression vector is a Pol III dependent promoter driven shRNA construct suitable to be integrated into a ubiquitously active Pol II dependent locus.

34. (New) The method of claim 20, wherein the Pol III dependent promoter is selected from an inducible U6 promoter and an inducible H1 promoter.

35. (New) The method of claim 1, wherein the expression vector is a Pol II dependent promoter driven shRNA construct suitable to be integrated into a ubiquitously active Pol II dependent locus.

36. (New) The method of claim 22, wherein the Pol III dependent promoter is a inducible CMV promoter.

37. (New) The method of claim 1, wherein the shRNA comprises
(I) at least one DNA segment A-B-C wherein

A is a 15 to 35, preferably 19 to 29 bp DNA sequence with at least 95%, preferably 100% complementarily to the gene to be knocked down;

B is a spacer DNA sequence having 5 to 9 bp forming the loop of the expressed RNA hair pin molecule, and

C is a 15 to 35, preferably 19 to 29 bp DNA sequence with at least 85% complementarily to the sequence A, and
(II) a stop and or polyadenylation.

38. (New) The method of claim 24, wherein A is a 19 to 29 bp sequence with 100% complementarily to the gene to be knocked down.

39. (New) The method of claim 1, wherein the expression vector is integrated at a polymerase dependent locus of the living organism, tissue culture or cell culture.

40. (New) The method of claim 1, wherein the method for constitutive and/or inducible gene knock down in a vertebrate comprises integrating the expression vector into ES cells of the vertebrate.

41. (New) A vertebrate, or tissue or cell culture derived from a vertebrate having stably integrated, preferably at a polymerase II dependent locus of the vertebrate, tissue culture or cells of the cell culture, an expression vector comprising a short hairpin RNA construct under control of a ubiquitous promoter.

42. (New) The vertebrate tissue or cell culture of claim 28, which is or is derived from a non-human vertebrate.

43. (New) The vertebrate of claim 29 which is selected from the group of vertebrates consisting of mouse and fish.

44. (New) An expression vector comprising a short hairpin RNA construct under control of a ubiquitous promoter.